



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/604,756	08/14/2003	Junaid Syed	3017	1755

31424 7590 04/22/2005

BABCOCK IP LLC
24154 LAKESIDE DRIVE
LAKE ZURICH, IL 60047

EXAMINER

A, MINH D

ART UNIT PAPER NUMBER

2821

DATE MAILED: 04/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary	Application No.	Applicant(s)	
	10/604,756	SYED ET AL.	
	Examiner	Art Unit	
	Minh D A	2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/16/05.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-17 is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-12, 14 and 18-22 is/are rejected.
- 7) ☒ Claim(s) 7 and 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 2-9 are objected to because of the following informalities:

Claims 2-4, 8-9, line 1, "the apparatus of claim 1" should be deleted and insert ---the radome of claim 1---.

Claims 5-7, line 1, "the apparatus of claim 4" should be deleted and insert ---the radome of claim 4---. Appropriate correction is required

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3 and 9 are rejected under 35 U.S.C. 102(b) as being unpatentable by Levy (US 4,581,615).

Regarding claim 1, Levy discloses a radome (10) for a reflector antenna (11) having a reflector with a vertex area, the radome(10) comprising a central portion (15) surrounded by an outer portion (56) having a radius configured to focus a surrounded by an outer portion (56)', reflected component of an RF signal reflected by the reflector antenna to the vertex area; and the outer portion (56) having a radius greater than the central portion (15). See figures 1-8, col.3, lines 54-68 to col.7, lines 1-45.

Regarding claim 2, Levy discloses that, a transition between the central portion and the outer portion is located at a position where the reflected component (see focus

Art Unit: 2821

(20 and 22) from the outer portion closest to the transition reflects from the reflector without intersecting with a feed assembly of the reflector antenna (11). See figures 1-5.

Regarding claim 3, Levy discloses that, the radome (10) is injection molded dielectric plastic. See col.4, lines 1-15.

Regarding claim 9, Levy discloses the RF absorbing material located in the vertex area. See figure 1-5.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4-6, 8, 10-12, 14-18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Levy (US 4,581,615) in view of Ellis et al (US 6,191,753).

Regarding claims 4-6 and 10, Levy discloses a radome (10) for a reflector antenna (11) having a reflector with a vertex area. See figures 1-8, col.3, lines 54-68 to col.7, lines 1-45.

Levy does not teach that, radome (10) adapted to cover an a plurality of tabs formed proximate a periphery of the open end of the reflector', the tabs configured to pass through a corresponding plurality of cut outs formed in a periphery of the reflector.

However, Ellis discloses the cover assembly (320) for covering a plurality of tabs (324-328) formed proximate a periphery of the open end of the reflector', the tabs (324-

Art Unit: 2821

328) configured to pass through a corresponding plurality of cut outs formed in a periphery of the reflector. See figures 4-15, col.3, lines 59-67 to col.11, lines 1-34.

It would have been an obvious to one of ordinary skill in the art at the time the invention was made to employ the cover assembly for covering cover an a plurality of tabs formed proximate a periphery of the open end of the reflector', the tabs configured to pass through a corresponding plurality of cut outs formed in a periphery of the reflector such as that suggested by Ellis in the radome antenna of Levy in order to protect the antenna from ice, snow and wind.

Regarding claims 8, 11 and 19, Levy does not disclose that the tabs retain the radome on the reflector when the radome is rotated after the tabs are passed through the cut outs. However, Ellis discloses the tabs retain the radome on the reflector when the radome is rotated after the tabs are passed through the cut outs. See figures 15-22.

Regarding claim 12, Levy does not disclose a plurality of support posts formed proximate the periphery of the radome which the reflector seats against when the tabs are passed through the cutouts. However, Ellis discloses all limitations in figures 4-22.

Regarding claim 14, Levy does not disclose that, a plurality of absorbing retainers arranged proximate a periphery of the radome. However, Ellis discloses a plurality of absorbing retainers arranged proximate a periphery of the radome. See figures 15-22.

Regarding claims 18 and 20-22, Levy discloses an antenna comprising'. a feed ; a reflector (11)', and a radome (10) adapted to cover said reflector.

Levy does not disclose the reflector (11) and radome (11) having interlocking peripheral structures configured such that said radome is joined to said reflector by mating said structures and rotating said radome relative to said reflector.

However, Ellis discloses the cover assembly (320) having interlocking peripheral structures configured such that said radome is joined to said reflector by mating said structures and rotating said radome relative to said reflector. See figures 4-22, col.3, lines 59-67 to col.11, lines 1-34.

It would have been an obvious to one of ordinary skill in the art at the time the invention was made to employ the cover assembly (320) having interlocking peripheral structures configured such that said radome is joined to said reflector by mating said structures and rotating said radome relative to said reflector such as that suggested by Ellis in the radome antenna of Levy in order to protect the antenna from ice, snow and wind.

Allowable Subject Matter

6. Claims 7, 13 and 15-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art does not teach that, a plurality of locking clips configured to compress when the tabs are passed through the cut outs; the locking clips decompressing into the cut outs when the radome is rotated after the tabs are passed

Art Unit: 2821

through the cut outs; the locking clips decompressed into the cut outs inhibiting further rotation of the radome recited in dependent claims 7 and 13.

The prior art does not teach that, a reflector antenna, comprising: a reflector with a vertex area; a feed assembly coupled to the reflector proximate the vertex area; a plurality of cut outs in a periphery of the reflector', a radome adapted to cover an open end of the reflector', the radome having a plurality of tabs arranged to correspond with the cut outs; the tabs and the cut outs co-operating to removably secure the radome to the reflector', the radome having a central portion with a radius selected to focus a reflected component of RF signals transmitted by the reflector antenna upon the vertex area; and the vertex area covered by an RF absorbing material recited in independent claim 15.

Response to Arguments

7. Applicant's arguments, see filed on 12/23/04, with respect to the rejection(s) of claim(s) 1-6, 8-12, 14-22 under Sharman have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Levy (US 4, 581, 615) and Ellis et al (US 6,191,753).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Butle (US 6,437,757) and Desargant et al. (US 6,570,540) are cited to show a reflector antenna.

Art Unit: 2821

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Minh A whose telephone number is (571) 272-1817. The examiner can normally be reached on M-F (5:30 –2:30 PM).

If attempts to reach the examiner by telephone is unsuccessful, the examiner's supervisor, Don Wong, can be reached on (571) 272-1834. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and (703) 872-9319 for final communications.

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center receptionist whose telephone number is (571) 272-1553.



TUYET VO
PRIMARY EXAMINER

Examiner

Minh A

Art unit 2821

4/15/05